

Technical Purchase Description (TPD) For Oven Cleaning Compounds

1. Scope

This technical purchase description (TPD) covers two types of commercially available oven cleaners suitable for removing heavy, baked-on grease and carbonized soil deposits on grills, ovens, fryers, other kitchen equipment (including stainless steel), and vertical and horizontal surfaces where such deposits might occur.

2. Classification.

The product shall be of the following types:

- Type 1 – Aerosol
- Type 2 – Liquid/Gel

3. Units of Issue

The oven cleaner shall be available in the following units of issue:

Type 1:

- 1. 18 ounce containers

Type 2:

- 1. 1 gallon containers

(Suggested units of issue. Other units of issue will also be considered and not limited to the units listed below.)

4. Requirements

4.1 Material

The composition of the oven cleaner shall be optional with the manufacturer, but shall meet the requirements of this TPD.

4.2 Finished product

The oven cleaner shall be uniform solution, free of sediment and foreign materials. The liquid shall be either a concentrate or a ready-to-use solution. The addition of fragrance to the oven cleaner is optional.

4.2.1 pH

The pH of the oven cleaner (without the propellant as a component) shall be determined as specified in ASTM E 70. The pH shall be not less than 13.

4.2.2 Flammability

The oven cleaner shall have a flash point greater than 140°F (60°C).

4.2.3 Cleaning Efficiency

The cleaning efficiency of the oven cleaner shall be determined by test comparisons with two other oven cleaners from other manufacturers. The oven cleaner shall completely remove a soil of the following composition:

<u>Soil Composition</u>	<u>Weight percent</u>
Corn Oil (Mazola)	84
Sugar (granulated)	8
Flour (standard, bleached)	8

Procedure: While stirring, heat corn oil to 65.5°C - 93°C (150°F - 200°F). While continuing to stir, add sugar and flour and mix thoroughly. Allow mixture to cool to room temperature before use.

While constantly stirring the soil mixture, paint two porcelain enamel test panels and two stainless steel Grade 430 test panels. The test panels shall be approximately 7.62 cm X 7.62 cm (3 in X 3 in). Bake panels in a horizontal position for 20 minutes at 218°C - 232°C (425°F - 450°F). After panels have cooled to room temperature, place them in a horizontal position. Apply the oven cleaner to the soiled panels until the cleaner completely covers the surface of the panels. Allow panels to sit for 30 minutes in a horizontal position at room temperature. Dampen a sponge lightly and flush with water to remove the soil. Dry panels and apply oven cleaner again and repeat the procedure. After damp sponge and flushing with water, the oven cleaner shall, by visual observation, completely remove all the soil on the panel and leave no visible film.

4.2.4 Aerosol Delivery Rate

The aerosol oven cleaner (Type 1) shall have a delivery rate, at 21°C (70°F) of 1.0 to 3.5 grams per second when tested in accordance with ASTM D 3069.

4.3. Prohibited Materials

4.3.1 Carcinogens

The materials used in the oven cleaner shall not contain any known or suspected human carcinogens in concentrations equal to or greater than 0.1% (by weight) as defined in: Code of Federal Regulations 29 CFR 1910.1000 Series, Occupational Safety and Health Administration (OSHA) Subpart Z Regulated Carcinogens/Toxic and Hazardous Substance List (latest edition); International Agency for Research on Cancer (IARC) Groups 1, 2A, and 2B (latest edition); and the latest annual report of the National

Toxicology Program's (NTP) of Known to be Human Carcinogens, and Reasonably Anticipated to be Human Carcinogens.

4.3.2 Reproductive Hazards

The materials used in the oven cleaner shall not contain the following occupational reproductive hazardous chemicals if used in concentrations equal to or greater than 0.1 percent (by weight): acetohydroxamic acid, aminopterin, arsenic, benomyl, benzene, bromoxynil, cadmium, carbon disulfide, carbon monoxide, chlordecone, cyanazine, cycloheximide, cyhexatin, dinocap, dinoseb, 1,2-dibromo-3-chloropropane, m-dinitrobenzene, o-dinitrobenzene, p-dinitrobenzene, epichlorohydrin, ethylene glycol monoethyl ether, ethylene glycol monoethyl ether acetate, ethylene glycol monomethyl ether, ethylene monomethyl ether acetate, ethylene oxide, hexachlorobenzene, hydroxurea, lead, mercury and mercury compounds, methyl bromide, methyl mercury, nickel carbonyl, polybrominated biphenyls, polychlorinated biphenyls, 2,3,7,8-tetrachloro-dibenzo-para-dioxin, toluene, and warfarin and any other chemical species listed in OPNAVINST 5100.23, Chapter 29, Appendix 29-B. The most current version of the instruction can be obtained from the internet website: <http://www.navosh.net>.

4.4 Hazardous Waste

The oven cleaner shall not be classified as a hazardous waste in accordance with 40 CFR 261.

4.5 Material Safety Data Sheets (MSDSs).

The contracting activity shall be provided a material safety data sheet with each contract bid/proposal or prior to contract award. The MSDS shall be provided in accordance with the requirements of FED-STD-313 and 29 CFR 1910.1200, Hazardous Communication Standard. The MSDS shall be included with each shipment of the material covered by this TPD. The MSDS must be the most current version for the product.

4.6 Shelf Life. The oven cleaner shall have a minimum shelf life of 36 months.

5. Regulatory Requirements.

5.1 Environmental Considerations. The product delivered under this TPD shall be in accordance with the environmental requirements of 40 CFR.

5.2 Recycling. The contractor is encouraged to use recovered materials in accordance with Public Law 94-580 to the maximum extent practicable.

5.3 Ozone-depleting substances.

The materials used in the cleaner shall not contain Class I or Class II Ozone-depleting substances as defined in 40 CFR 82 in concentrations equal to or greater than 1.0% (by weight).

5.4 Volatile Organic Compounds (VOCs).

VOC levels of the oven cleaner must be stated as a percent of VOCs by weight of the cleaner and shall not exceed 8 weight percent VOC for aerosols and pumps and 5 weight percent VOC for liquids in accordance with 40 CFR 59 Subpart C.

6. Quality Assurance Provisions

6.1 Contractor Certification

The product provided shall meet the TPD requirements and conform to the producer's own drawings, specifications, standards, and quality assurance practices and be the same product offered for sale in the commercial market. The Government reserves the right to require proof of such conformance.

6.2 Market Acceptability. The following market acceptability criteria are necessary to document the quality of the product to be provided under this TPD:

- a) The company furnishing the oven cleaner must have been producing a product meeting the requirements of this technical purchase description for at least 6 months.
- b) The Government reserves the right to require proof of such conformance.

7. Preparation for Delivery

The item(s) shall be packaged and packed in accordance with the latest revision of ASTM D 3951, Standard Practice for Commercial Packaging unless otherwise specified in the contract.

8. Sources for Documents

8.1 Copies of the Code of Federal Regulations (CFR) and Federal Acquisition Regulation (FAR) may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Website: [HYPERLINK http://www.access.gpo.gov/nara/cfr/cfr-table-sarch.html](http://www.access.gpo.gov/nara/cfr/cfr-table-sarch.html).

8.2 Copies of all IARC publications may be obtained directly from IARCPress, 150 Cours Albert Thomas, F-69372 Lyon cedex 08, France (Fax: +33 4 72 73 83 02; E-mail press@iarc.fr).

8.3 Copies of the most recent Annual Report on Carcinogens may be obtained from the U.S. Department of Health and Human Services, Public Health Service,

National Toxicology Program, P.O. Box 12233, Research Triangle Park, NC 27709.
Website: HYPERLINK <http://ntp-server.niehs.nih.gov/NewHomeRoc/AboutRoC.html>

8.4 Copies of ASTM test methods may be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959
www.astm.org

8.5 Copies of Public Law 94-580 “Resource Conservation & Recovery Act” (RCRA) may be obtained from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

8.6 Copies of Federal and Military Standards may be obtained from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094. Website: <http://www.dodssp.daps.mil>.